ABSTRACT

The present invention provides an optical faceplate made from fibrous crystals which are transparent, colorless and work as a coherent faceplate. The numeric aperture of a single fiber is within a range of about 0.20 to 0.66. A nonlimiting example of such a fibrous crystal is Ulexite (also known as "TV" rock). In one embodiment the present invention comprises an optical faceplate made of a fibrous crystal in lab-created, artificially grown form. In a further embodiment, an optical faceplate is made of crystals not found in nature, or not found in nature in fibrous form. In one embodiment the present invention provides a seamlessly tiled projection display comprising at least one fibrous crystal faceplate as a pre-screen in combination with a diffused rear projection screen. A faceplate made of fibrous crystals does not have a size limitation. In one embodiment, smaller plates of crystals may be seamlessly tiled into a larger plate, satisfying the need for a large projection screen. The projection display in accordance with the present invention is provided efficiently and at a low cost.